

Paper II: Technical Subject

1. Medical jurisprudence

- 1.1 Universal principles of medical ethics and the Geneva Declaration, 1948
- 1.2 Consent, types of consents, the doctrine of informed expressed consent
- 1.3 Euthanasia and its ethics and legality; impacts of euthanasia
- 1.4 Medical ethics in specific situations such as HIV/AIDS, terminal cancer patients; role of treating doctors in hunger strikes and management of patients in critical conditions
- 1.5 Medical negligence and professional misconduct
- 1.6 Medical evidences and their application in a court of law
- 1.7 Witness and expert witness testimony in a court of law

2. Forensic pathology

2.1 Thanatology

- 2.1.1 Death; cause of death, mechanism of death and manner of death
- 2.1.2 WHO classification of diseases and death; hospital and medico-legal certification of death
- 2.1.3 Changes after death and their application in the estimation of the time of death

2.2 Medico-legal autopsy

- 2.2.1 Anatomy, developmental anatomy and pathology of the organs of all the systems with especial attention to that of the skull, brain, cervical vertebrae, jaws, neck, tracheo-bronchial tree, lungs, heart, aorta, esophagus, stomach, liver, pancreas, spleen, kidneys, the female reproductive organs, the thoracic cage, long bones, and the larger joints (shoulder, elbow, wrist, knee, ankle)
- 2.2.2 Types of death that need to undergo a medico-legal autopsy in Nepal; pathological and medico-legal autopsies
- 2.2.3 Autopsy procedures: external and internal examination; sample collection for various purposes; special techniques in the dissection of the neck, heart, pelvic organs and other organs; floatation test
- 2.2.4 Special consideration in the autopsy of both natural and unnatural deaths: death due to disease; decomposed bodies; mutilated bodies; charred bodies; fragmentary remains; fetuses; possible sudden infant deaths; sudden natural adult deaths; different types of violent asphyxial deaths; fire-arm deaths; bomb blast and other explosion deaths; deaths associated with anaesthesia and surgery; starvation deaths; deaths due to heat and cold; low and high voltage electrocution and lightning deaths; deaths during illegal abortion; custodial deaths; mass disaster deaths
- 2.2.5 Post-mortem artifacts; anthropophagy
- 2.2.6 Exhumation

2.3 Injuries

- 2.3.1 Classification; blunt force, sharp force and firearm injuries
- 2.3.2 Thermal, electrical, lightning and radiation injuries
- 2.3.3 Chemical and explosive injuries
- 2.3.4 Self inflicted, fabricated and defense injuries; fresh and healing injuries
- 2.3.5 Craniocerebral injuries
- 2.3.6 Transportation injuries
- 2.3.7 Medico-legal aspect of injuries and death

3. Clinical Forensic Medicine

3.1 Sexual offences

- 3.1.1 Alleged rape and rape; incest; sexual perversions; other types of sexual assault; examination of the victim/accused of alleged sexual offences

3.2 Medico-legal aspect of abortion

3.3 Medico-legal aspects of virginity, pregnancy and delivery

3.4 Medico-legal aspects of impotence, frigidity, sterility and artificial insemination

3.5 Medico-legal aspects of IVF and surrogate motherhood

3.6 Injury and clinical forensic medicine

- 3.6.1 Simple and grievous hurt or Angabhanga
- 3.6.2 Medico-legal examination of physical assault cases
- 3.6.3 Medico-legal examination of victim of torture
- 3.6.4 Medico-legal aspects of battered baby syndrome and other forms of child abuses
- 3.6.5 Medico-legal aspects of domestic and gender-based violence

3.7 Forensic psychiatry

- 3.7.1 Insanity
- 3.7.2 Criminal and civil responsibilities of the insane
- 3.7.3 Mental state examination
- 3.7.4 True and feigned insanity
- 3.7.5 Medico-legal aspects of mental unsoundness

3.8 Age estimation of the living with especial consideration of new born babies, of teenagers, of dead bodies, and of skeletal remains

4. Identification

- 4.1 Presumptive and positive identification
- 4.2 Data for identification in living persons and dead bodies
- 4.3 Ante-mortem data and its application in personal identification
- 4.4 Different methods of positive identification: fingerprint, dental methods and DNA profiling
- 4.5 Disaster victim identification (DVI)
- 4.6 Medico-legal aspects of identification

5. Forensic Sciences

- 5.1 Locard's principle in crime investigation
- 5.2 Trace evidences and importance in crime investigation
- 5.3 Blood and blood stains in investigation of criminal and civil cases
- 5.4 Semen and seminal stains in crime investigation
- 5.5 Saliva, hairs and other biological samples in different criminal situations
- 5.6 Analytical toxicology and its importance in determining the cause of death
- 5.7 Role of DNA analysis in civil and criminal cases
- 5.8 Analysis of trace evidence in ballistics and explosions
- 5.9 Role of fingerprint, foot print, lying detector and questioned documents in investigation and adjudication of justice
- 5.10 Situation of the forensic science laboratories in Nepal

6. Forensic Anthropology

- 6.1 Analysis of race, sex, age and stature from bones
- 6.2 Time since death and cause of death in skeletal remains examination
- 6.3 Personal identification from skeletal remains analysis

7. Medical Imaging

- 7.1 Application of radiological methods in age estimation and personal identification
- 7.2 Application of radiological methods in autopsy work
- 7.3 Study of X-rays, CT scans MRIs and other medical imagings
- 7.4 Virtual autopsy

8. Forensic Odontology

- 8.1 Application of dental information in age estimation and personal identification
- 8.2 Dental data and disaster victim identification
- 8.3 Bite marks analysis in crime investigation

9. Forensic Toxicology

- 9.1 Medical and legal duties of health workers in cases of poisoning
- 9.2 Corrosive poisons
- 9.3 Irritant poisons
- 9.4 Neurotoxins
- 9.5 Cardiac poisons
- 9.6 Asphyxiants
- 9.7 Domestic poisons
- 9.8 Poisoning by therapeutic substances
- 9.9 Food poisoning and poisonous foods
- 9.10 Drug dependence and drug abuse
- 9.11 Alcohol and its medico-legal aspects; examination of drunkenness

10. Acts/ Regulations Related to Medical Practice and Investigation

- 10.1 Human Organ Transplant Act
- 10.2 Consumer Protection Act
- 10.3 NMC act and regulation
- 10.4 Muluki Ain : Chapters of Jyan sambandhi, Ilaj Garneko, Jabarjasti karani, Hadnata Karani, Pasu Karani, Kutpit, Danda Sajaya, Adalati Bandobasta
- 10.5 Evidence Act
- 10.6 State Cases Act and Regulation
- 10.7 Torture Compensation Act
- 10.8 Laws related to the rational use of drugs

11. Practice of Forensic Medicine

- 11.1 History and development of forensic medicine
- 11.2 Death investigation systems in the developed and developing world
- 11.3 Natural and unnatural death; certification of these deaths; death statistics of Nepal
- 11.4 Medico-legal and death investigation system in Nepal and its weaknesses
- 11.5 Epidemiology and investigation of natural and unnatural death in Nepal
- 11.6 Mass disasters and principles of their timely and efficient management
- 11.7 Scene of death and scene of crime investigation

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